



Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method¹

This standard is issued under the fixed designation D 4263; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

^{ε1} NOTE—Keywords were added editorially in January 1993.

1. Scope

1.1 This test method is used to indicate the presence of capillary moisture in concrete.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

1.3 *This standard does not purport to address all of the safety problems, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use. For specific caution statements, see Section 4.*

2. Significance and Use

2.1 Capillary moisture in the concrete may be detrimental to the performance of certain coating systems that cannot tolerate moisture on or within the surface boundary.

2.2 This test method is used prior to the application of coatings on concrete.

3. Materials

3.1 *Transparent Polyethylene Sheet*, commercially available, approximately 4 mils (0.1 mm) thick.

3.2 *Adhesive Tape* that will adhere to the substrate. (Duct tape 2 in. (50 mm) wide is suggested.)

4. Cautions

4.1 This test method shall be conducted when the surface

temperature and ambient conditions are within the established parameters for application of the coating system.

4.2 Avoid direct sunlight, direct heat, or damage to the plastic sheet, as such treatment affects the reliability of the results.

5. Procedure

5.1 Tape a segment of plastic sheet, approximately 18 by 18 in. (457 by 457 mm), tightly to the concrete surface making sure that all edges are sealed.

5.2 Allow the plastic sheet to remain in place a minimum of 16 h.

5.3 After the allowed time has elapsed, remove the plastic sheet and visually inspect the underside of the sheet and the concrete surface of the patch for the presence of moisture.

5.4 Sampling:

5.4.1 *Floors*—One test area per 500 ft² (46 m²) or portion thereof, of surface areas unless otherwise specified.

5.4.2 *Walls and Ceilings*—One test area per 500 ft² (46 m²) or portion thereof, of surface area unless otherwise specified.

5.4.3 The recommended practice is a minimum of one test for each 10 ft (3 m) of vertical rise in all elevation starting within 12 in. (300 mm) of the floor.

6. Report

6.1 Report the presence or absence of moisture.

7. Precision and Bias

7.1 This test method indicates the presence of capillary moisture. No precision or bias has been established for this test method.

8. Keywords

8.1 concrete; moisture

¹ This test method is under the jurisdiction of ASTM Committee D-33 on Protective Coating and Lining Work for Power Generating Facilities and is the direct responsibility of Subcommittee D33.05 on Surface Preparation. Current edition approved Aug. 17, 1983. Published November 1983.

The American Society for Testing and Materials takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.

This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, 1916 Race St., Philadelphia, PA 19103.